REMARKS

Claims 1-30 are cancelled and new Claims 31-60 remain in the application. No new matter is added by the new claims.

In the Advisory Action dated June 7, 2005, the Examiner stated that:

> "Irrespective of applicants position as to the intended use of the apparatus, the invention of Pearce is capable of being used as claimed. The entire exterior frame is rigid, and the robots 525 on the frame rails can be positioned and operated such that movement of the frames rails relative to each other and to the plane is prevented."

The Examiner's statement is incorrect. The invention of Pearce is not "capable of being used as claimed" as explained in detail in the attached declaration of one of the Applicants, Scott J. Clifford. Mr. Clifford reviewed the Pearce et al patent and, based upon his experience in the field of robots and support structures for robots, he concluded that the Pearce et al. system would be inoperative if the bridges **24** were fixed relative to the path of travel of the automobile bodies.

The Examiner has not cited any support in the Pearce et al. patent for his statement that "the robots 525 on the frame rails can be positioned and operated such that movement of the frames rails relative to each other and to the plane is prevented." Clearly, such claim limitations are not expressly found in the Pearce et al. patent since the bridges **24** are shown and described as being movable. If the claim limitations are not expressly found in a reference, inherent anticipation may not be established by "probabilities or possibilities". The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient. *MEHL/Biophile Int'l Corp. v. Milgraum*, 192 F.3d 1362, 1365, 52 U.S.P.Q.2d 1303, 1305 (Fed. Cir. 1999) (citing In re Oelrich, 666 F.2d 578, 581, 212 U.S.P.Q. 323, 326 (C.C.P.A. 1981) (quoting Hansgirg v. Kemmer, 102 F.2d 212, 214, 40 U.S.P.Q. 665 667 (C.C.P.A. 1939)).

Pearce et al. describes a first embodiment of his robotic assembly system with reference to Figs. 1-12. It is stated in Col. 3, Line 36 through Col. 4, Line 12:

> FIG. 2 is a general schematic view of one robotic station which for simplicity has one robot member **71** and one vision system indicated at **32**.
>
> As illustrated a typical robot member in accordance with the present invention has the capacity to move or be moved in the direction of each of the arrows, ie. along the plane of the frame **21**; transversely cross the frame **21**; about the vertical axis of the robot member **71**; and lower tool attachment member **113**

(see FIG. 8) may be moved about a horizontal axis normal to the vertical axis of robot member **30**.

For convenience in this application these axes will be referred to, respectively, as the "X" axis; the "Y" axis; the "Z" axis; the "P" axis; and the "R" axis.

The automobile upon which the work is to be done is indicated in dotted outline at **50** and moves under the frame **21** on a carriage **52** along a carriage track **51**.

The bridges such as **24** comprise a pair of spaced apart members **41** and **42** which are connected by bridge ends such as **43** and **44**.

On the bridge ends, motors such as **45** and **46** are mounted, and these motors are connected through a chain drive **47** and a ball nut assembly **48**, shown in the breakaway in FIG. 3, which engages with a ball screw **49**. Members **41** and **42** are supported by brackets such as **60** and **61** and shaft **62**. Rod **62** is further supported by bearings **63** and **64** and bridge **24** is movable along rod **62**. It will be understood that required suitable bearings and supports will be provided in accordance with approved engineering practice.

It will also be understood that each pair of motors **45** and **46** operate synchronously so that they move together and on operation of these motors through the engagement of the ball nuts and ball screws the bridges **24** will move along the frame **21** as indicated by the arrows, **70**. The ball screw and ball nut engagement permits each of the carriages on each frame to be moved independently of the other and to permit the movements to be extremely fine, ie. of the order of thousandths of an inch. This almost infinite adjustment provided by the ball screw drive is a factor in accommodating the fine adjustment required of the robot tool heads. It will be apparent that it is the driving of the ball nut assembly which permits the independent movement of each of the carriages.

As shown in Fig. 2 (copy attached), the bridge **24** moves along the "X" axis relative to the lateral members **22** of the frame **21** and the robot carriage **71** moves along the "Y" axis relative to the bridge **24**. This relative movement is confirmed by the arrows **70** in Fig. 3 (copy attached) of the Pearce et al. in which the bridges **24** are shown in solid and phantom lines.

As seen in Fig. 1 (copy attached) of Pearce et al., the bridge members **24, 25, 26** and **27** move from the positions shown at the conveyors **500** toward the car bodies **50**, as described above, in order to place the doors in the door openings.

It is stated that Figs. 13-18 illustrate those stations in accordance with the present invention which have a facility for assembling components to the automobile body (see Col. 5, Lines 65 through Col. 6, Line 2). The bridge members **24** and the lateral members **22** also are shown in Fig. 15 used in a deck lid mounting station. The door mounting stations **11** and **12** of

Fig. 1 are illustrated in more detail in Figs. 16-18 wherein a front door mounting station is illustrated. See the description of these figures in Col. 3, Lines 6-13 as "a front door mounting station in accordance with the present invention". The stations shown in Figs. 16-18 are substantially the same as those shown in Figs. 13-15 (see Col. 6, Lines 45-48). The robot carriage **525** is moved over to a position above the accumulator **500** where it picks up a door **526** and moves through 90° and into an approximate assembly position. This rotation about the "Z" axis (vertical) is shown in Fig. 18 presented below. In order to move the doors **526** from the positions shown in Fig. 18 to the automobile body, the bridge members A and B (24) on which the robot carriages **525** are mounted move from the accumulators **500** to the body along the lateral members (22). As stated, the bridges, robot carriages and the tool mounts carrying doors are adjusted to accommodate the deviation (Col. 6, Line 68 through Col. 7, Line 2). Clearly, the bridge members A and B shown in Figs. 17 and 18 move relative to the lateral members as do the corresponding members shown in Figs. 2 and 3.

The bridge members A and B (**24**) on which the robot carriages **525** are mounted move between the accumulators **500** and **500'** and the automobile body along the lateral members (**22**) in the "X" direction with reference to the system shown in Fig. 2. The robot support structure shown in Figs. 17 and 18 is rotated 90° from the position shown in Fig. 1. If the bridge members A and B (**24**) are fixed relative to the "X" axis, as suggested by the Examiner, the system becomes inoperative with respect to the task of transporting doors to the vehicle body. Clearly there is no suggestion in Pearce et al. that "the robots 525 on the frame rails can be positioned and operated such that movement of the frames rails relative to each other and to the plane is prevented." There is no teaching or suggestion in Pearce et al. that would motivate one of ordinary skill in the art to fix the bridge members **24**.

Even if the Pearce et al. bridge member 24 were fixed, such structure would not correspond to the apparatus defined by Applicants' claims.

Independent Claim 31 defines the frame rail on which the robot is movable as being attached to the legs. In the Pearce et al. system, the bridge members **24** are mounted on the transverse members **23** (Fig. 1) and are not attached to the legs **13, 18, 19** and **20**. Also, Claim 31 defines the width of the rigid frame structure as being minimized relative to the object. That

is not the case with the Pearce et al. system since the lateral members **22** are located outside of the bridge members **24**.

Independent Claim 40 defines the width of the rigid frame structure as being minimized relative to the object. That is not the case with the Pearce et al. system since the lateral members **22** are located outside of the bridge members **24**. Also, Claim 40 defines a paint applicator as being mounted on the robot arms. The Pearce et al. patent does not disclose a paint applicator and the robot members do not provide the motions required for painting.

Independent Claims 48 and 55 define the robot as having four axes of movement relative to the moveable mounting base. The Pearce et al. robot, as shown in Fig. 2, has only three axes of movement ("Z", "P" and "R").

In view of the new claims and the above arguments, Applicants believe that the claims of record now define patentable subject matter over the art of record. Accordingly, an early Notice of Allowance is respectfully requested.